

Application No. 10/623,530
Art Unit: 1745

Amendment under 37 C.F.R. §1.111
Attorney Docket No.: 030846

AMENDMENTS TO THE DRAWINGS

Please **amend** Figs. 2 and 9 of the drawings in accordance with the attached replacement sheets of drawings.

REMARKS

Reconsideration of this application, as presently amended, is respectfully requested.
Claims 1-24 are pending in this application. Claims 1-24 stand rejected.

Objections to the claims

On page 5, lines 5-6 of the Office Action, claim 17 was objected to for informalities. Specifically, claim 17 was objected to because the word “keybord” in claim 17 should be -- keyboard--. Claim 17 has been amended to correct this informality.

Withdrawal of the objection to the claims is respectfully requested.

Objections to the specification

The specification was objected to for various informalities.

Specifically, on page 5, lines 7-10 of the Office Action, the Examiner notes that the numeral 326 in Fig. 9 is not described in the specification. The reference numeral “326” in Fig. 9 has been deleted from Fig. 9. Accordingly, the lack of description of the element 326 is obviated.

Further, the Examiner points out that numeral 362 refers to a “tube” in the description of Fig. 2 on page 7, lines 2 and 9 of the specification. However, numeral 362 also refers to “sponge-like cushioning members” in the description of Figs. 10-12, e.g., on page 14, line 4 of the specification.

Reference numeral “362” in Fig. 2, and the corresponding description in the specification, has been changed to --352-- to eliminate the duplicative use of the reference numeral.

In view of the above amendments and remarks, reconsideration and withdrawal of the objections to the specification are respectfully requested.

Changes to the Drawings

As noted in the discussion of the objections to the specification above, Figs. 2 and 9 of the drawings have been amended in a manner consistent with the specification. Specifically, Fig. 2 has been amended to change reference element “362” to --352--. Fig. 9 has been amended to delete reference element “326”, which reference element is not described in the specification.

Approval of the changes to the drawings is respectfully requested.

Claim Rejections-35 U.S.C. §103

Claims 1-5, 7, 9-14, 17 and 20-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Nakagawa et al.** (USP 6,519,147) in view of **Guagiano et al.** (USP 6,352,455). Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over **Nakagawa et al.** in view of **Guagiano et al.** and further in view of **Larson et al.** (USP 5,720,338). Claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over **Nakagawa et al.** in view of **Guagiano et al.** and further in view of **Hockaday** (USP 6,326,097). Claims 15, 18 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Nakagawa et al.** in view of **Guagiano et al.** and further in view of **Agata et al.** (USP

6,474,823). Claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over **Nakagawa et al.** in view of **Guagiano et al.** and further in view of **Ohashi et al.** (USP 6,611,425). Claim 24 was rejected under 35 U.S.C. §103(a) as being unpatentable over **Nakagawa et al.** in view of **Guagiano et al.** and further in view of **Philips et al.** (USP 5,587,880). For the reasons set forth in detail below, these rejections, to the extent it is considered to apply to the amended claims, is respectfully traversed.

Claim 1 has been amended to clarify features of the invention by reciting “a component that transmits a force to said elastomer bag, the force being a pressure applied to the component from external to the electronic apparatus or a vibration generated by the component” and “wherein the elastomer bag is disposed in the electronic apparatus in a position where the elastomer bag receives the force from the component thereby causing the coolant to flow.”

The Office Action does not specify exactly which element is considered to correspond to the previously claimed “component to which pressure is applied or which provides vibration.” However, assuming, *arguendo*, that elements of the pump 11 of **Nakagawa et al.** or the ends caps 14, 16 or the chamber 24, which can apply pressure to the bladder 20 of **Guagliano et al.**, are considered to correspond to the previously claimed “component to which pressure is applied,” none of pump 11 or the end caps 14, 16 or chamber 24 are “a component that transmits a force to said elastomer bag, the force being a pressure applied to the component from external to the electronic apparatus or a vibration generated by the component” and “wherein the elastomer bag is disposed in the electronic apparatus in a position where the elastomer bag receives the force from the component thereby causing the coolant to flow”, as presently claimed.

Therefore, claim 1, and claims dependent therefrom, patentably distinguish over the combination of **Nakagawa et al.** and **Guagliano et al.** for at least the reasons set forth above.

Furthermore, as will be discussed in detail below, it is respectfully submitted that the rejection under §103 is improper because a *prima facie* case of obviousness had not been established. Specifically, there is no motivation or incentive for combining the cited references to arrive at the claimed invention, as required by §103.

Nakagawa et al. is related to a cooling system for a notebook computer that utilizes a pump 11 to circulate cooling fluid. More specifically, **Nakagawa et al.** disclose a notebook computer having a liquid cooling system. As shown in the embodiment of Fig. 1 of **Nakagawa et al.**, a heat receiving head 10 is fixed to the CPU 4 of a notebook personal computer. The CPU 4 is the biggest heat source in a body 1 of the personal computer, and the heat generated by the CPU 4 is collected by cooling liquid circulating in the heat receiving head 10. A tube 12 is connected to the heat receiving head 10 and is filled with a cooling liquid. The tube 12 with cooling liquid is led between a liquid crystal panel of a display part 2 where the heat absorbed by the liquid is radiated through the front cover. See, e.g., column 4, lines 13-27.

As shown in Figs. 1 and 3, a pump 11 pressurizes the cooling liquid and circulates the cooling liquid throughout the notebook personal computer. See, e.g., column 6, lines 21-25 and 38-45.

With respect to independent claim 1, the Examiner recognizes that **Nakagawa et al.** does not disclose or suggest the claimed “elastomer bag which receives a pressure or vibration from said component,” “a first check valve connected to a port of said elastomer bag” and “a second

check valve connected to another port of said elastomer bag.” See Office Action, page 2, lines 16-18.

The **Guagiano et al.** reference was relied upon by the Examiner to teach the features missing from **Nakagawa et al.**, specifically, the “elastomer bag,” “first check valve,” and “second check valve.” The Examiner asserts that **Guagiano et al.** discloses “a pump that includes a bladder 20 made of elastomer (column 4, lines 1-7), thus constituting an elastomer bag, and which is connected at either end to check valves (25, 26), thus forming inlet and outlet ports.” See Office Action, page 2, lines 18-20.

The Examiner further asserts “Because this pump may be operated by electricity (column 4, lines 23-26) or by pressure (column 4, lines 52-54), and because its operation is independent of position (column 5, lines 42-44), *it would be obvious to use the pump of Guagiano et al. to impel the coolant in the computer of Nakagawa et al.* The number of pumps and connections (series or parallel) therebetween would be a matter of optimization to the artisan, who would be familiar with fluid mechanics.”

Guagiano et al. disclose a propulsion device suitable for propelling a vessel, such as a submarine, through water (see column 1, lines 59-61). The propulsion device may be magnetically powered or hydraulically powered (see column 3, lines 1-4). More specifically, as shown in Fig. 1, the propulsion device 10 of **Guagiano et al.** includes a sleeve-shaped housing 12, the sleeve-shaped housing being sealed by end caps 14, 16. Each end cap 14, 16 includes centrally located check valves 25, 26, respectively. A sleeve-shaped flexible bladder 20, which has an inner layer 23 formed of an elastomeric material, is sealed to each end of the end caps 14,

16, thereby forming an inner chamber 22 within the bladder 20, and an annular outer chamber 24 between the bladder and cylindrical housing 12. See, e.g., column 3, line 47 – column 4, line 15.

The leading and/or trailing end caps 14, 16 are movable, and may be powered electromagnetically or by a permanent magnet. Movement of the end cap(s) 14, 16 away from each other causes tensioning of the bladder 20, thereby increasing the length and decreasing the diameter of the bladder 20. During this tensioning of the bladder 20, water within the inner chamber 22 is displaced through the valve 26 causing movement of the vessel to which the propulsion device 10 is attached. See column 4, lines 23-51.

For a *prima facie* case of obviousness to exist, there must be “some objective teaching in the prior art or . . . knowledge generally available to one of ordinary skill in the art [that] would lead that individual to combine the relevant teachings of the references.” *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988).

First, the **Nakagawa et al.** and **Guagiano et al.** references are directed to completely different and unrelated types of systems. Specifically, **Nakagawa et al.** is directed to a device for cooling a notebook computer. In contrast, **Guagiano et al.** is directed to a device for propelling a vessel, such as a submarine, and is completely unrelated to a cooling system. In fact, the device of **Guagiano et al.** is designed to propel a very large vessel, such as a submarine, and, based on the reference teachings, one of ordinary skill in the art would not be motivated to incorporate this propulsion device into a small notebook computer. There is absolutely no suggestion or motivation in either of the references to combine the references.

The Office Action asserts, as motivation for combining the references, “Because this pump may be *operated by electricity ...or by pressure ...and because its operation is independent of position ...* it would be obvious to use the pump of Guagiano et al. to impel the coolant in the computer of Nakagawa et al.” [emphasis added].

It is respectfully submitted that the fact that the pump of **Guagiano et al.** may be “operated by electricity” is not adequate motivation to combine the references. If this were adequate motivation, then any electrically operated devices could be combined and almost any combination of electronic devices would be considered obvious.

Further, it is submitted that operation “by pressure” in no way suggests that the *propulsion device* of **Guagiano et al.** would be combined with the *cooling device for a computer* in **Nakagawa et al.** Many devices operate “by pressure.” However, operation “by pressure” in no way suggests replacing the pump 11 of **Nakagawa et al.** with a propulsion device having a bladder that operates to propel a vessel by stretching and compressing the bladder.

Still further, operation “independent of position” means that the efficiency of the **Guagiano et al.** does not depend on its orientation (see column 5, lines 43-44). It is submitted that this teaching in no way suggests combining the propulsion device of **Guagiano et al.** with the cooling system of **Nakagawa et al.**

In summary, it is submitted that there is no motivation or incentive provided in the reference to combine the references, and that the combination of references is the result of improper hindsight reconstruction of the invention based on applicants’ own teachings. Accordingly, it is respectfully submitted that a *prima facie* case of obviousness has not been

established. Reconsideration and withdrawal of the rejection of independent claim 1, and claims dependent therefrom, under §103 are respectfully requested for these additional reasons.

Each of dependent claims 6, 8, 15, 16, 18, 19 and 24 depends either directly or indirectly from claim 1 and patentably distinguishes over the various combinations of references for the same reasons set forth above with respect to claim 1.

CONCLUSION

In view of the foregoing amendments and accompanying remarks, it is submitted that all pending claims are in condition for allowance. A prompt and favorable reconsideration of the rejection and an indication of allowability of all pending claims are earnestly solicited.

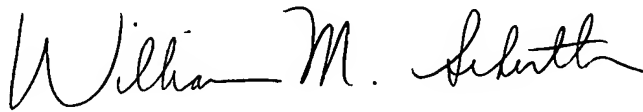
If the Examiner believes that there are issues remaining to be resolved in this application, the Examiner is invited to contact the undersigned attorney at the telephone number indicated below to arrange for an interview to expedite and complete prosecution of this case.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, reading "William M. Schertler". The signature is fluid and cursive, with the first name "William" and last name "Schertler" clearly legible, and "M." in the middle.

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WMS/dlt
Attachments: Replacement Drawings – 2 sheets